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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/736,654

12/16/2003

Brent R. Jones

D/A3616

6297

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11/15/2005

PATENT DOCUMENTATION CENTER

XEROX CORPORATION

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ROCHESTER, NY 14644

EXAMINER

LIANG, LEONARD S


ART UNIT

PAPER NUMBER

2853

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |  |  |
|------------------------------|-------------------------------|--|--|
| <b>Office Action Summary</b> | Application No.<br>10/736,654 | Applicant(s)<br>JONES ET AL.  |  |
|                              | Examiner<br>Leonard S. Liang  | Art Unit<br>2853   |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-19 is/are allowed.
- 6) ☒ Claim(s) 1-2, 6-8, 11-12, 20 is/are rejected.
- 7) ☒ Claim(s) 3-5, 9 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/16/03</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION*****Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 9, 18, 23-25, 29A-D, 60A-D. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 18A-D, 24A-D, 25A-D. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not

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accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities:

In paragraph 0001, insert application numbers. In paragraph 0030, line 1 should state "plurality of anchor". Paragraphs 0035 and 0036 include improper highlighting.

Appropriate correction is required.

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: Claim 1 states, "A melt assembly...wherein the heating device is a positive temperature coefficient (PTC material)." This statement doesn't make sense in that it states that the heating device is a coefficient. It will be construed that the claim should state "A melt assembly...wherein the heating device is **comprised of** a positive temperature coefficient (PTC) material." Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

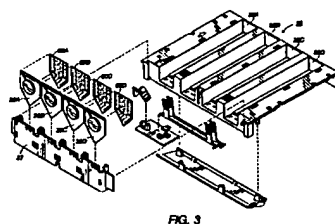
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-2, 6-8, and 11-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al (US Pat 6530655) in view of Crawford (US Pat 5784089).

Jones et al discloses:

- {claim 1} A melt assembly for use in a phase change printer comprising a drip plate (figure 3, reference 60A-D); a self-regulating heating device thermally connected to the drip plate (figure 3, reference 29A-D)



- {claim 2} the drip plate has first and second surfaces, the heating device contacts the first surface; and the second surface is exposed to ink sticks (figure 3, reference 29A-D, 60A-D)
- {claim 6} wherein the drip plate is metal (column 7, lines 16-17)
- {claim 7} wherein the drip plate is a nonferrous metal (column 7, lines 16-17)
- {claim 11} a melt plate fastened to the drip plate (figure 3, reference 60A-D; 29A-D)
- {claim 12} an ink loader (figure 3)

Jones et al differs from the claimed invention in that it does not disclose:

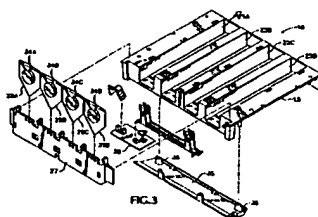
- {claim 1} the heating device is comprised of a positive temperature coefficient (PTC) material

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- {claim 8} current only passes through one surface of the PTC material to generate heat

Crawford discloses:

- {claim 1} the heating device is comprised of a positive temperature coefficient (PTC) material (figure 3, reference 34A-D; column 4, lines 45-47)



- {claim 8} current only passes through one surface of the PTC material to generate heat (figure 4; column 5, lines 31-54)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Crawford into the invention of Jones et al. The motivation for the skilled artisan in doing so is to gain the benefit of limiting the current so that the heater cannot rise above an acceptable free air temperature (column 4, lines 45-47).

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al (US Pat 6530655) in view of Scheuhing (US Pat 5832835).

Jones et al discloses with respect to claim 20, an ink loader for use in a phase change ink printer; at least one channel having an entry end and an exit end; and a melt assembly, which includes a metallic drip plate with first and second sides, wherein the lower portion of the plate is shaped to form a drip plate (figures 3-4; column 7, lines 16-17).

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Jones et al differs from the claimed invention in that it does not disclose a non metallic, non ceramic drip plate.

Scheuhing discloses, with respect to claim 20, that using a plastic surface as a material in contact with ink facilitates cleaning of the surface.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Scheuhing into the invention of Jones et al, so that the metal drip plate of Jones et al is replaced with a plastic one. The motivation for the skilled artisan in doing so is to gain the benefit of facilitating the cleaning of the drip plate.

#### ***Allowable Subject Matter***

Claims 3-5, and 9-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 3 discloses "wherein the heating device is located inside the drip plate," which was not found, taught, or disclosed in the prior arts.

Claims 4-5 depend from objected claim 3.

Claim 9 discloses "wherein the surface of the PTC material through which current is flowing is the surface contacting the second side of the drip plate," which was not found, taught, or disclosed in the prior arts (Jones et al in view of Crawford suggests that the surface of the PTC material through which current is flowing is the surface contacting the first side of the drip plate).

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Claim 10 depends from objected claim 9.

Claims 13-19 are allowed.

The following is an examiner's statement of reasons for allowance:

The drip plate of Jones et al uses the heating device of melt plates 29A-D. It does not contain an interior space for an internal heating device. Nor was there any art found which taught or suggested an internal heater for a drip plate.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jones et al (US PgPub 20020180852) discloses a drip plate design for a solid ink printer.

Thornton et al (US Pat 6089686) discloses a method for supplying ink to an ink jet printer.

Ikezaki (US Pat 6193365) discloses a hot melt type inkjet head and sheet shaped heating device used for hot melt type inkjet head.



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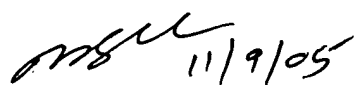
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S. Liang whose telephone number is (571) 272-2148.

The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**MANISH S. SHAH**  
**PRIMARY EXAMINER**